



2022 Annual Drinking Water Quality Report

For

The Westborough Water Department
Westborough, Massachusetts
DEP PWSID # 2328000

I. PUBLIC WATER SYSTEM INFORMATION

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What's New?

Water system improvements in 2022 included: Water main replacement on Sampson Road and Flanders Road; flushing of hydrants and exercising of gate valves throughout the town; completion of leak detection over the entire water distribution system including 95 miles of water mains; and planning and design of upgrades and improvements to the Oak Street Water Treatment Plant for the removal of Per- and Polyfluoroalkyl Substances (PFAS6). The Plans and Specifications for the PFAS water treatment system (30% Design) are currently under review by MassDEP. The rain barrel program, which began in 2008, was also promoted with 18 barrels purchased in 2022.

Cross Connection Information

A cross-connection is any actual or potential connection between the drinking water lines and potential sources of pollution or contamination, such as a piping arrangement or equipment that allows the drinking water to come in contact with non-potable liquids, solids or gases hazardous to humans in the event of a backflow event. Backflow is the undesired reverse of the water flow in the drinking water distribution lines. This backward flow of the water can occur when the pressure created by equipment, such as a boiler or air-conditioning system, is higher than the water pressure inside the water distribution line (back pressure). It can also occur when the pressure in the distribution line drops due to routine occurrences such as water main breaks or heavy water demand, causing the water to flow backward inside the water distribution system (back-siphonage).

Backflow is a problem that many water consumers are unaware of. It's a problem that each and every water customer has a responsibility to help prevent. The Westborough DPW currently offers free hose bib vacuum breakers to town residents. These small devices can be installed on your outside faucets to prevent backflow into your home through a hose. Please visit the DPW to obtain a free vacuum breaker or to learn more about cross connections. To learn about other responsibilities of your water system visit the Massachusetts Department of Environmental Protection (MassDEP) website at <https://www.mass.gov/files/documents/2016/08/ot/ccdefreg.pdf> or call the Westborough DPW at 508-366-3070.

What can I do to help prevent a cross-connection? Without the proper protection, something as simple as a garden hose has the potential to contaminate or pollute the drinking water lines in your house. In fact, over half of the country's cross-connection incidents involve unprotected garden hoses. There are very simple steps that you as a drinking water user can take to prevent such hazards, they are:

- NEVER submerge a hose in soapy water buckets, pet watering containers, pool, tubs, sinks, drains or chemicals.
- NEVER attach a hose to a garden sprayer without the proper backflow preventer.
- Buy and install a hose bib vacuum breaker in any threaded water fixture. The installation can be as easy as attaching a garden hose to a spigot. This inexpensive device is available at most hardware stores and home-improvement centers.
- Identify and be aware of potential cross-connections to your water line.
- Buy appliances and equipment with a backflow preventer.
- Buy and install backflow prevention devices or assemblies for all high and moderate hazard connections.

If you are the owner or manager of a property that is being used as a commercial, industrial or institutional facility you must have your property's plumbing system surveyed for cross-connection by your water purveyor. If your property has NOT been surveyed for cross-connection contact the water department to schedule a cross-connection survey. The Massachusetts Drinking Water Regulations, 310 CMR 22.00, requires all public water systems to have an approved and fully implemented Cross-connection Control Program (CCCP). The Westborough Water Department is working diligently to protect the public health of its drinking water customers from the hazards caused by unprotected cross-connections through the implementation of its cross-connection survey program, elimination or proper protection of all identified cross-connections, the registration of all cross-connections protected by reduced pressure backflow preventers (RPBPs) or double check valve assemblies (DCVAs), and the implementation of a testing program for all RPBPs and DCVAs.

II. YOUR DRINKING WATER SOURCE

Where Does My Drinking Water Come From?

Your water is provided by the following sources listed below:

Source Name	Source ID#	Source Type	Location
Hopkinton Road Well	2328000-01G	Groundwater	Located off Hopkinton Road
Morse Street Well	2328000-02G	Groundwater	Located at the intersection of Morse Street and Upton Road
Andrews Well #1	2328000-03G	Groundwater	Located off Andrews Street
Andrews Well #R1	2328000-11G	Groundwater	Located off Andrews Street
Andrews Well #2	2328000-04G	Groundwater	Located off Andrews Street
Wilkinson Well	2328000-06G	Groundwater	Located adjacent to Andrews Well #1
Otis Street Well #1	2328000-05G	Groundwater	Located off Fisher Street
Otis Street Well #2	2328000-12G	Groundwater	Located off Fisher Street
Chauncy Lake Well #1	2328000-07G	Groundwater	Located off Chauncy Street on the southwest shore of Lake Chauncy
Chauncy Lake Well #2	2328000-08G	Groundwater	Located off Chauncy Street on the southwest shore of Lake Chauncy
Indian Meadow Well	2328000-10G	Groundwater	Located north of Rt. 9 and West of Rt. 135 – OUT OF SERVICE
Sandra Pond	2328000-01S	Surface Water	Located in the southeast side of town.

Is My Water Treated?

The Sandra Pond Reservoir, the Wilkinson Well, the Andrews Wells, the Indian Meadow Well, and Otis Street Well #2 are treated at the Westborough Water Purification Plant located on Fisher Street with filtration (to remove small particles and organisms), disinfection (to protect against bacteria), corrosion control (to reduce lead and copper), and fluoride (to prevent tooth decay/cavities.). The Chauncy Wells are treated at the Oak Street Water Treatment Plant. The Otis Well #1, the Morse Street Well, and the Hopkinton Road Well have individual on-site chemical treatment for disinfection, corrosion control, and fluoridation.

How Are These Sources Protected?

The MassDEP has prepared a Source Water Assessment Program (SWAP) Report for the water supply source(s) serving this water system. The SWAP Report assesses the susceptibility of public water supplies and is available at 131 Oak Street and online at <https://www.mass.gov/doc/central-region-source-water-assessment-protection-swap-program-reports-0/download> For more information, call Joshua Van Houten at 508-366-3070.

The SWAP Report notes the key issues of inappropriate activities in Zone I, residential land uses, transportation corridors, hazardous materials storage and use, oil or hazardous material contamination sites, agricultural activities, and comprehensive wellhead protection planning in the water supply protection area for all water sources. The report commends our water system on the frequent inspection of Zone I areas associated with our water sources, our implementation of well head protection plans and surface water protection plans, our emergency response plan, and our inspection of commercial activities within Zone II areas.

Both homeowners and business owners should be aware that wellhead protection is the responsibility of everyone in the community. Improper disposal of gasoline, paint, solvents, pesticides, herbicides or other potential contaminants could compromise the quality of the water supplies. Proper application of lawn treatments and proper use and maintenance of septic systems are important components of a wellhead protection program and are the responsibility of property owners in wellhead protection areas.

What is My System's Ranking?

A susceptibility ranking of "moderate" was assigned to the Hopkinton Road and Morse Street Wells; a susceptibility ranking of "high" was assigned to the Andrews, Wilkinson, Otis Street, Chauncy Lake and Indian Meadows Wells along with the Westborough Reservoir using the information collected during the assessment by the MassDEP.

What Can Be Done To Improve Protection?

The SWAP report recommends that the Westborough Water Department: (1) Inspect the Zone I and Zone A regularly, and when feasible, remove any non-water supply activities. (2) Educate residents on ways they can help protect drinking water sources. (3) Work with emergency response teams to ensure that they are aware of the storm water drainage in the watershed and to cooperate on responding to spills or accidents.

Our public water system plans to address these protection recommendations by: (1) Continuing to work with state and local officials to educate residents, lawmakers, emergency response teams and developers on the importance of drinking water source protection. (2) Continuing regular inspection of Zone I and Zone A areas for all of our drinking water sources in order to provide the best quality water possible to the residents of Westborough.

III. SUBSTANCES FOUND IN TAP WATER

Sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

What Contaminants Could Be in My Water?

Microbial contaminants: such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.

Inorganic contaminants: such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, and farming.

Pesticides and herbicides: which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.

Organic chemical contaminants: including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.

Radioactive contaminants: which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the MassDEP and U.S. Environmental Protection Agency (EPA) prescribe regulations that limit the number of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) and Massachusetts Department of Public Health (DPH) regulations establish limits for contaminants in bottled water that must provide the same protection for public health. All drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline (800-426-4791).

Vulnerability

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, persons with HIV/AIDS or other immune system disorders, some elderly, and some infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on lowering the risk of infection by cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

IV. IMPORTANT DEFINITIONS

Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed by the EPA in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Massachusetts Maximum Contaminant Level (MMCL) – The highest level of a contaminant that is allowed MassDEP in drinking water. MMCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Contaminant Level Goal (MCLG) – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Action Level (AL) – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Treatment Technique (TT) – A required process intended to reduce the level of a contaminant in drinking water.

90th Percentile – Out of every 10 homes sampled, 9 were at or below this level.

Secondary Maximum Contaminant Level (SMCL) – These standards are developed to protect the aesthetic qualities of drinking water and are not health based.

Massachusetts Office of Research and Standards Guideline (ORSG) – This is the concentration of a chemical in drinking water, at or below which, adverse health effects are unlikely to occur after chronic (lifetime) exposure. If exceeded, it serves as an indicator of the potential need for further action.

Maximum Residual Disinfectant Level (MRDL) -- The highest level of a disinfectant (chlorine, chloramines, chlorine dioxide) allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

Maximum Residual Disinfectant Level Goal (MRDLG) -- The level of a drinking water disinfectant (chlorine, chloramines, chlorine dioxide) below which there is no known expected risk to health.

MRDLG's do not reflect the benefits of the use of disinfectants to control microbial contaminants.

ppm = parts per million, or milligrams per liter (mg/l)

ND = Not Detected

ppb = parts per billion, or micrograms per liter (ug/l)

NTU = Nephelometric Turbidity Units

ppt = parts per trillion, or nanograms per liter (ng/l)

pCi/l = pCiCuries per liter (a measure of radioactivity)

V. WATER QUALITY TESTING RESULTS

What Does This Data Represent?

The water quality information presented in the tables below is from the most recent testing conducted in accordance with the regulations. All data shown was collected during the last calendar year unless otherwise noted in the tables. All contaminant results were found to meet applicable EPA and DEP standards.

LEAD AND COPPER

	Date(s) Collected	90 TH percentile	Action Level	MCLG	# of sites sampled	# of sites above Action Level	Possible Source of Contamination
Lead (ppb)	9/18/20	0	15	0	30	0	Corrosion of household plumbing systems; Erosion of natural deposits
Copper (ppm)	09/18/20	0.38	1.3	1.3	30	0	Corrosion of household plumbing systems; Erosion of natural deposits; Leaching from wood preservatives

TURBIDITY

	TT	Lowest Monthly % of Samples	Highest Detected Daily Value	Violation (Y/N)	Possible Source of Contamination
Daily Compliance (NTU)	5	NA	0.162 (01/16/2022)	N	Soil runoff
Monthly Compliance*	At least 95%	100%	NA	N	Soil runoff

Turbidity is a measure of the cloudiness of the water. We monitor it because it is a good indicator of water quality.

*Monthly turbidity compliance is related to a specific treatment technique (TT). Our system filters the water so at least 95% of our samples each month must be below the turbidity limits specified in the regulations.

OTHER REGULATED CONTAMINANTS

Regulated Contaminants	Date(s) Collected	Highest Detect	Range Detected	Highest Average	MCL or MRDL	MCLG, SMCL or MRDLG	Violation (Y/N)	Possible Source(s) of Contamination
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Inorganic Contaminants

Arsenic (ppm)	06/21&23/22 06/28/22 07/20/22 09/29/22 22/28/22	<0.001	<0.001	NA	10	NA	N	Erosion of natural deposits; runoff from orchards; runoff from glass and electronics production wastes
Barium (ppm)	06/21/22	0.017	0.017	NA	2	2	N	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	Monthly	0.76	0.5 – 0.76	0.63	4	2	N	Erosion of natural deposits; water additive which promotes strong teeth; discharge from fertilizer and aluminum factories
Nitrate (ppm)	06/24/22 06/28/22	1.0	0.36 – 1.0	NA	10	10	N	Runoff from fertilizer use; leaching from septic tanks; sewage; erosion of natural deposits
Perchlorate (ppb)	09/29/22	0.22	<0.05 – 0.22	NA	2	2	N	Rocket propellants, fireworks, munitions, flares, blasting agents
Sodium (ppm)	06/21/22	50	50	NA		20	N	Natural sources, salt used on roadways and septic system effluent

Organic Contaminants

Per- and Polyfluoroalkyl Substances (PFAS6) (ppt)	01/25/22 06/23/22 06/28/22 07/29/22 08/31/22 10/31/22 11/28/22	12.6	<2.3 – 12.6	NA	20*	20	N	Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture and oil resistant coatings on fabrics and other materials. Additional sources include the use and disposal of products containing these PFAS, such as fire-fighting foams.
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*20 ppt is the Massachusetts Maximum Contaminant Level (MMCL)

Radioactive Contaminants

Gross Alpha (pCi/l) (minus uranium)	06/28/22 12/07/22	0.445	0.107-0.445	NA	15	0	N	Erosion of natural deposits
Radium 226 (pCi/l)	06/20/18 09/12/18	0	0	NA	5	0	N	Erosion of natural deposits
Radium 228 (pCi/l)	06/20/18 09/12/18	0	0	NA	5	0	N	Erosion of natural deposits
GrossBeta/photon emitters (pCi/L) ▲	6/12/03	21	6.4 - 21.0	NA	50	0	N	Decay of natural and man-made deposits

NA - Not Applicable

▲ The MCL for beta particles is 4 mrem/year. EPA considers 50 pCi/L to be the level of concern for beta particles.

* Highest Quarterly Running Annual Average ■ Fluoride has a secondary contaminant level (SMCL) of 2 ppm

OTHER REGULATED CONTAMINANTS

Regulated Contaminants	Date(s) Collected	Highest Detect	Range Detected	Highest Average	MCL or MRDL	MCLG, SMCL or MRDLG	Violation (Y/N)	Possible Source(s) of Contamination
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Disinfectants and Disinfection By-Products

Total Trihalomethanes (TTHMs) (ppb)	02/02/22 05/03/22 08/02/22 11/03/22	62	23 – 62	49*	80	NA	N	Byproduct of drinking water chlorination
Haloacetic Acids (HAA5) (ppb)	02/02/22 05/03/22 08/02/22 11/03/22	21	2.1 – 21	18*	60	NA	N	Byproduct of drinking water disinfection
Chlorine (ppm)	Monthly at 20 sites	0.88	0.53 – 0.88	0.70*	4	4	N	Water additive used to control microbes

NA - Not Applicable

* Highest Running Average

Unregulated Contaminants

Unregulated Contaminants	Date(s) Collected	Result or Range Detected	Average Detected	SMCL	ORSG	Possible Source
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Inorganic Contaminants

Sodium (ppm)*	06/21/21	50	50	NA	20	Natural sources; runoff from use as salt on roadways; by-product of treatment process
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Organic Contaminants

Perfluorobutanesulfonic Acid (PFBS)(ppt)	01/25/22 06/23/22 06/28/22 07/29/22 08/31/22 10/31/22 11/28/22	0.85 – 5	2.59	NA	NA	Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture and oil resistant coatings on fabrics and other materials. Additional sources include the use and disposal of products containing these PFAS, such as fire-fighting foams.
Perfluorohexanoic Acid (PFHxA) (ppt)	01/25/22 06/23/22 06/28/22 07/29/22 08/31/22 10/31/22 11/28/22	<0.9 – 4.1	2.26	NA	NA	Discharges and emissions from industrial and manufacturing sources associated with the production or use of these PFAS, including production of moisture and oil resistant coatings on fabrics and other materials. Additional sources include the use and disposal of products containing these PFAS, such as fire-fighting foams.

*- Sodium-sensitive individuals, such as those experiencing hypertension, kidney failure, or congestive heart failure, should be aware of the sodium levels where exposures are being carefully controlled.

NA - Not Applicable

** - US EPA Office of Pesticide Programs Human Health Benchmark for Pesticides

Secondary Contaminants

Unregulated Contaminants	Date(s) Collected	Result or Range Detected	Average Detected	SMCL	ORSG	Possible Source
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Inorganic Contaminants

Iron (ppm)*	Monthly	<0.05 – 0.36	0.35	0.300	NA	Naturally occurring, corrosion of cast iron pipes
Manganese** (ppm)	Monthly	<0.01 - 0.06	0.032	0.050	20	Natural sources as well as discharges from industrial uses

* EPA has established a lifetime Health Advisory (HA) for manganese of 0.3 mg/L and an acute HA at 1.0 mg/L

Microbial Contaminants

Microbial Contaminants	Date(s) Collected	Highest Number of Positive Samples Collected Per Month	Average Detected	MCL	ORSG	Possible Source
Total Coliform Bacteria	Monthly at 32 sites	1*	NA	absent	NA	Total Coliform Bacteria are naturally occurring in the environment. These bacteria are used as an indicator that harmful bacteria may be present

NA - Not Applicable

*15 of the 17 iron samples were below the laboratory detection limit. The two samples with detectable iron concentrations were above the SMCL

**See Section IV COMPLIANCE WITH DRINKING WATER REGULATIONS of this report for more information.

Health Effects

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Westborough Water Department is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water>.

VI. COMPLIANCE WITH DRINKING WATER REGULATIONS

Does My Drinking Water Meet Current Health Standards?

We are committed to providing you with the best water quality available and we are pleased to announce that no violations occurred during 2022. The following information is provided so that you can be informed of the quality of your drinking water and the steps taken by the Westborough Water Department to reduce your exposure to harmful chemicals and pathogens.

As part of our effort to proactively manage and protect the Town's public water supply, the Westborough Water Department conducted testing for the emerging contaminant known as Per- and Polyfluoroalkyl Substances (PFAS) in 2022. PFAS are a family of man-made chemicals that have been used since the 1950's in a number of products including nonstick cookware, water resistant clothing, food packaging materials, and firefighting foam. PFAS is not currently regulated by the EPA. In October 2021, the MassDEP published a Massachusetts Maximum Contaminant Level (MMCL) of 20 ppt for six specific compounds including perfluorooctane sulfonic acid (PFOS); perfluorooctanoic acid (PFOA); perfluorohexane sulfonic acid (PFHxS); perfluorononanoic acid (PFNA); perfluoroheptanoic acid (PFHpA); and perfluorodecanoic acid (PFDA), collectively known as PFAS6. A number of other PFAS compounds are included in our testing and the results are presented for your information, but they are not currently regulated. Samples were collected from the individual sources as well as at the water treatment plants. None of the sample results from active water sources exceeded the MMCL for PFAS6. Please visit the MassDEP website at: www.mass.gov/info-details/per-and-polyfluoroalkyl-substances-pfas for more information about PFAS.

Drinking water remains a precious resource for our town and we ask you to please practice water conservation. **Call the DPW office at 508-366-3070 or visit the DEP website at www.state.ma.us/dep to learn ways to help conserve water.**

If you have any questions about this report or concerning your water utility, please contact Joshua Van Houten at the Westborough DPW at 508-366-3070 or Greg Kimball at the Water Purification Plant at 508-836-3672. We want our valued customers to be informed about their water utility. **If you have tenants, please post this report in a common area.**

This report was prepared for the Town by:

